INNOVATION & TECHNOLOGY

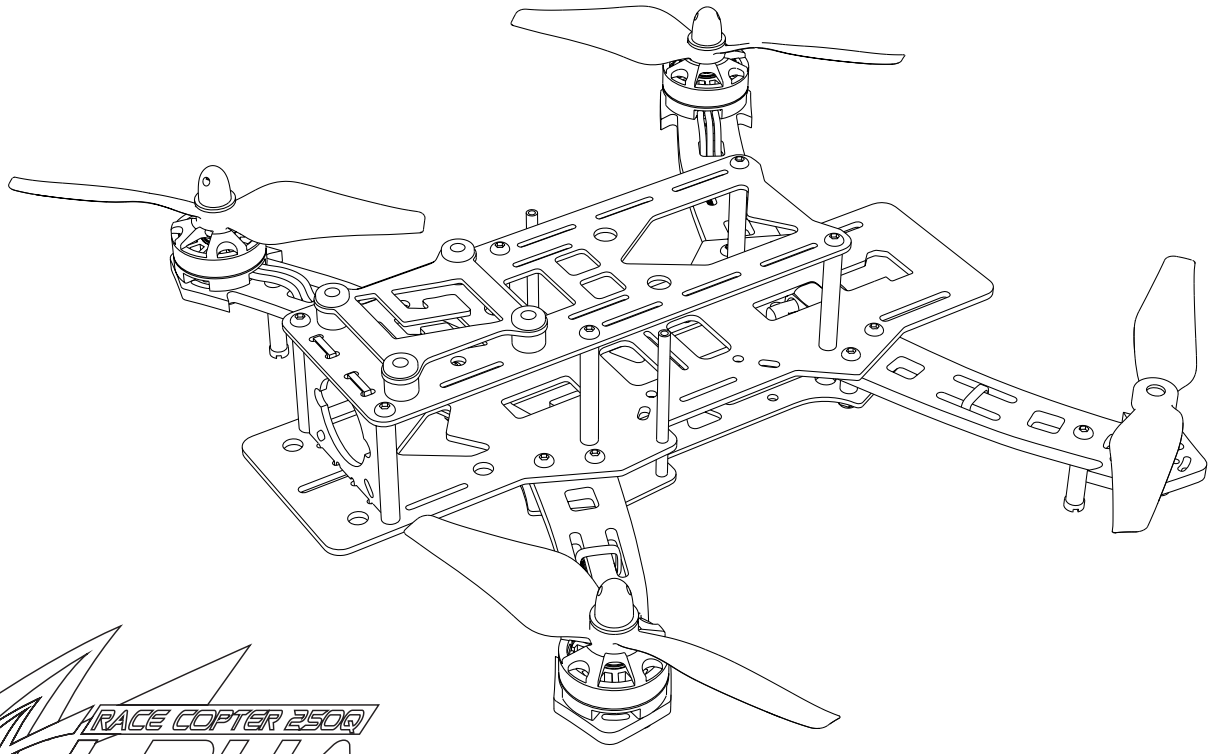
Graupner

Manual

Race Copter Alpha 250 Q

No. 16520

English



RACE COPTER 250Q
ALPHA

CE

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Introduction

Thank you very much for choosing a ***Graupner*** **RACE COPTER ALPHA 250Q**. This Race Copter is very versatile.

Read this manual carefully to achieve the best results with your Race Copter and first of all to control safely your model. If you experience any trouble during operation, take the instructions to help or ask your dealer or ***Graupner*** Service Centre.

Due to technical changes, the information may be changed in this manual without prior notice. Be always updated by checking periodically for news on our website, www.graupner.de

This product complies with national and European legal requirements.

To maintain this condition and to ensure safe operation, you must read and follow this user manual and the safety notes before using the product!

NOTE

This manual is part of that product. It contains important information concerning operation and handling. Keep these instructions for future reference! Take this into consideration when you pass it on to other future owner.

Service centre

Graupner/SJ-Zentralservice	**Servicehotline**
Graupner/SJ GmbH Henriettenstrasse 96 D-73230 Kirchheim / Teck	☎ (+49) (0)7021/722-130 Mon - Thu 7:30 am - 9:00 am 9:15 am - 4:00 pm Fri 9:00 am - 1:00 pm

Graupner in Internet

For the service centres outside Germany please refer to our website ***www.graupner.de***

Intended use

The Race Copter is the base to build a RC multicopter model. More punctual information about receiver can be found in the Technical data section.
The Race Copter is designed exclusively to be used as a battery-powered, radio controlled model, any other use is not allowed. For any improper use no warranty or liability is accepted. Read through this entire manual before you attempt to program or set the receiver.
Graupner/SJ constantly works on the development of all products; we reserve the right to change the item, its technology and equipment.

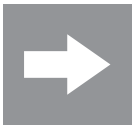
Target group

The Race Copter is not a toy. It is not suitable for children under 14 years. The assembly and operation of the Race Copter must be performed by experienced modellers. If you do not have sufficient knowledge about dealing with radio-controlled models, please contact an experienced modeller or a model club.

Package content

- **RACE COPTER ALPHA 250Q** Chassis kit
- 2x S7047 ULTRA 2804 2300KV brushless motors
- 2x S7048 ULTRA 2804 2300KV brushless motors
- 4x S3055 Ultra Control 12A speed controllers
- 2x 1347.5x3 propellers
- 2x 1348.5x3 propellers
- Manual for Race Copter Alpha 250Q

Symbols explication



Always follow the information marked with the **CAUTION** or **WARNING** symbol. The signal word **WARNING** indicates the potential for serious injury, the signal word **CAUTION** indicates potential minor injuries.
The **NOTE** indicates important information that should alert you to potential property damage.

Glue instruction This symbol shows that it is necessary to use a 2 components glue. Follow the related safety notes.

Glue instruction This symbol shows that it is necessary to use thread lock . Follow the related safety notes.

Soldering instruction This symbol shows that it is necessary to solder some cables and connectors.

Shrinking instruction This symbol shows connections which should be isolated by shrink tube.

Safety notes

WARNING

- These safety instructions are intended not only to protect the product, but also for your own and other people's safety. Therefore please read this section very carefully before using the product!
- Do not leave the packaging material lying around, this could be a dangerous toy for children.
- Persons, including children, with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, or not capable to use safely the Race Copter, must not use it without supervision or instruction by a responsible person.
- The operation of radio controlled models must be learned! If you have never driven such a model, then start extra carefully and make sure to be familiar with the reactions of the model to the remote control commands. Proceed responsibly.
- Always carry on a first range test and function test on the ground (hold the model tightly) before your model is used. Repeat the test with the motor running and with short bursts of throttle.
- Before you start using the remote control model, you have to check the further relevant laws and regulations. These laws you must obey in every case. Pay attention to the possibly different laws of the countries.
- The insurance is mandatory for all kinds of model operation. If you already have one check out whether the operation of the model is covered. If applicable, extend it to special model liability insurance. We recommend to provide the copter with a label, where are indicated the name, address, tel. n., E-mail and Insurance n. So that the copter can be clearly assigned in the event of a crash.
- For safety and (CE) certification the unauthorized conversion and / or modification of the product is not permitted.
- They may only be used our recommended components and accessories. Use only genuine matching ***Graupner*** connectors of the same design and the same material.
- Make sure that all connections are secure. Do not pull on the cables when you unplug the connector.
- Protect the receiver from dust, dirt, moisture and other foreign parts. Do not expose this equipment to vibration and excessive heat or cold. The remote control operation may be carried out only in "normal" ambient temperatures, in a range from -10 ° C to +55 ° C.

- Use all of your Hott components only with the latest Software version
- If any questions arise that can not be ascertained with the help of the operating manual, please contact us (contact information, see page 3) or another expert.

WARNING

- Pay attention, even while programming, that the connected motors do not start suddenly. Injury risk by the turning propellers! Program always the motors stop switch on the transmitter. (See transmitter manual)
- Avoid shock and pressure. Check the Race Copter regularly for damages to the housings and cables. Damaged or wet electronic components, even if re-dried, should no longer be used!
- Never touch the turning propellers, this can cause serious injury.
- The propellers must be mounted securely, thrown parts can cause serious injury.
- Keep long hair, loose clothing such as scarves, loose shirts or similar well away from the danger zone of the revolving propeller, they may be withdrawn by the propeller, flying debris can cause serious injury.
- Follow the safety notes of the required additional components.

Notes:

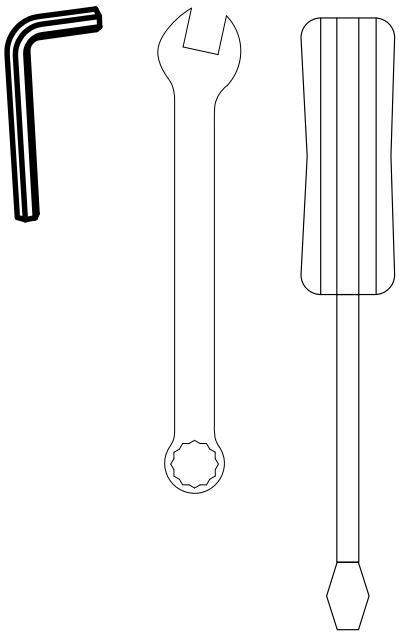
- After you perceive your model, check if all components are inside the package and eventual damages.
- Remove the battery from the model when transporting or when not in use.
- During transport protect the model and the transmitter from damages.

Care Clean the Race Copter only with the suitable cleaners. Good is a spirit-free cloth. Never use chemical cleaners, solvents, petrol, alcohol or similar.

Chassis assembly with motors and speed controllers

Chassis kit content

For assembly, you need a 3 mm Allen key, 5.5 mm spanner or socket wrench and a slot screwdriver



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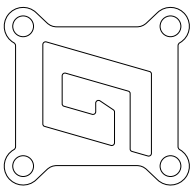

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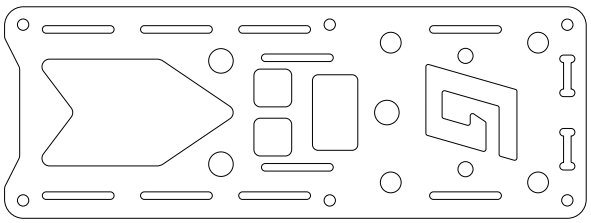

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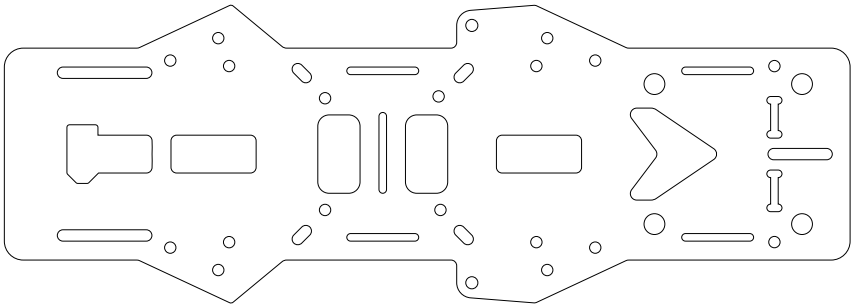

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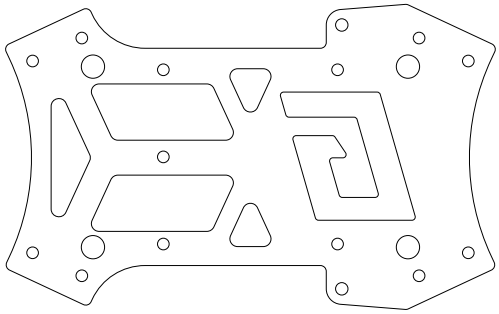

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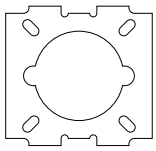

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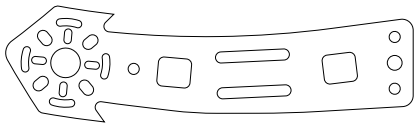
20mm

6x 16520.8
35mm

4x 16520.5



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5mm

5 x 16520.10
M3x8

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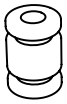
M3x6

9x 16520.12
M3x16

5x 16520.14



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M3x6

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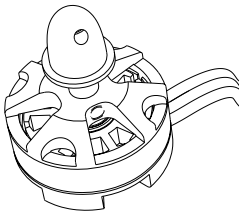
2x S7048



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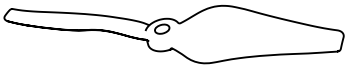

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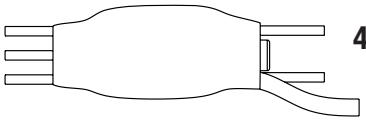

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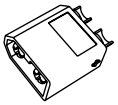

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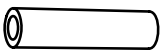

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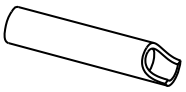

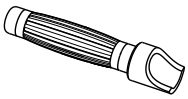

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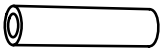

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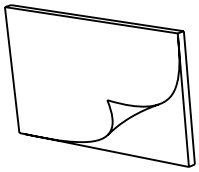


4x S8376

→ 1. → 2. → 3. → 4. ...

1.

4 x 16520.16
M3x6

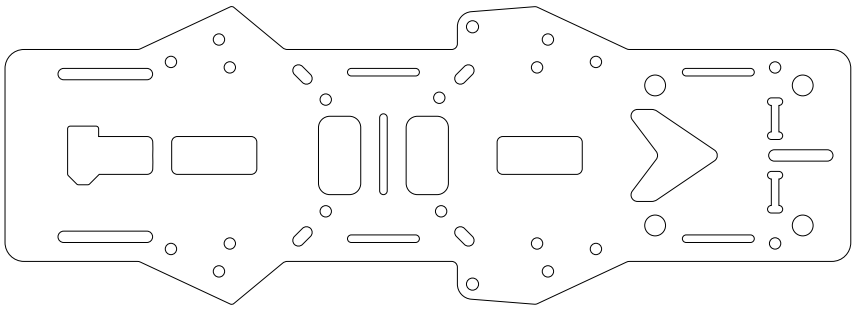
4 x 16520.10
M3x8

8 x 16520.12
M3x16

4 x 16520.7
20mm

8x 16520.9
5mm

1x 16520.3



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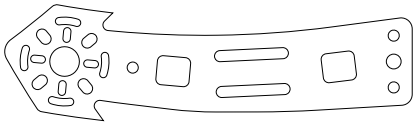

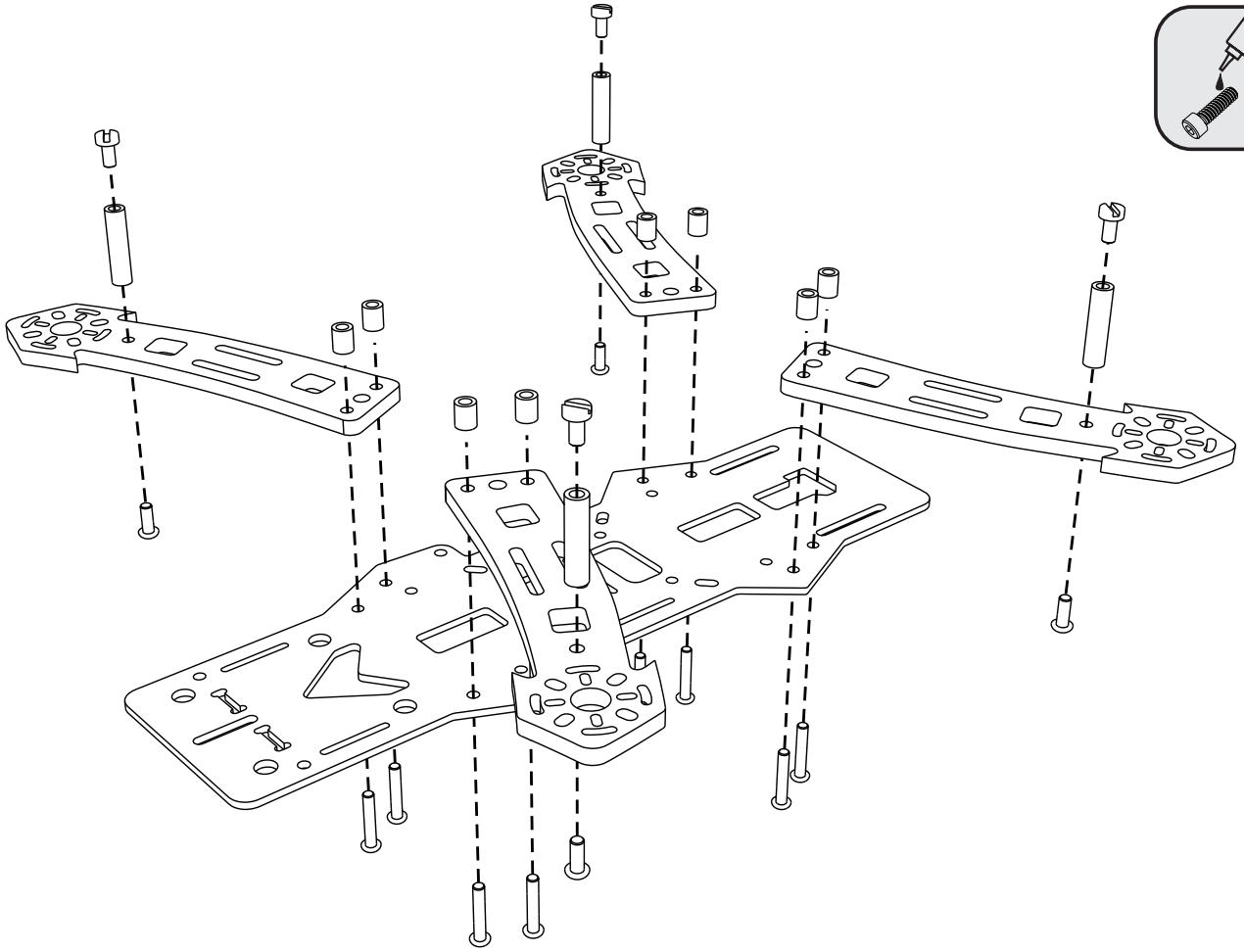

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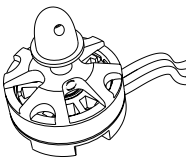

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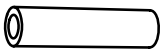

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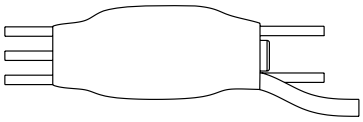

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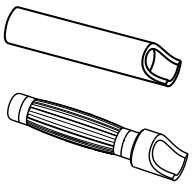

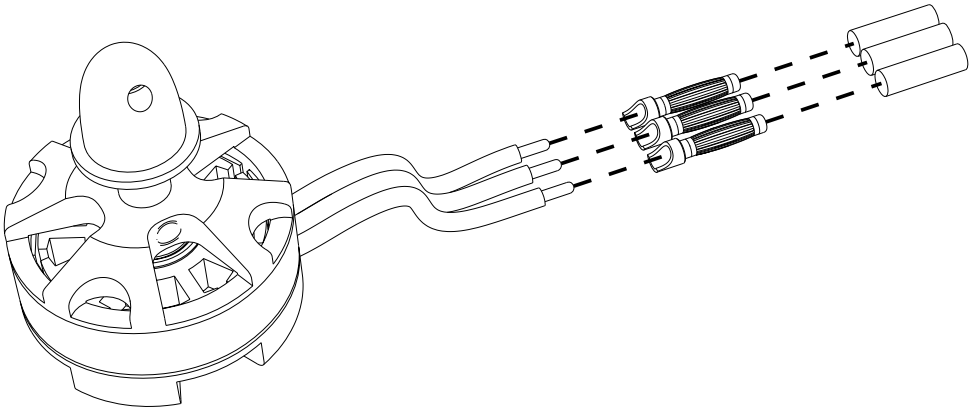

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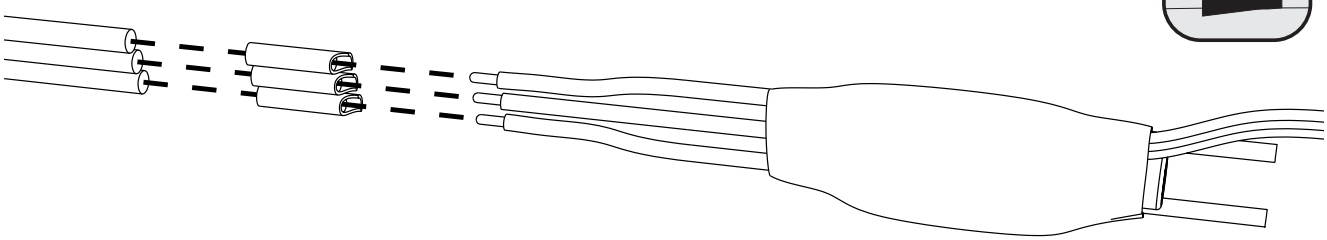

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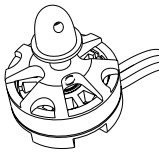
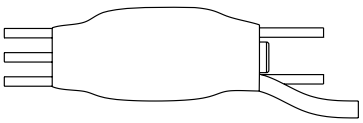
2x S7048



16x 16520.11
M3x6

4x S3055



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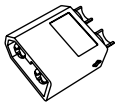

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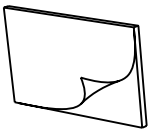

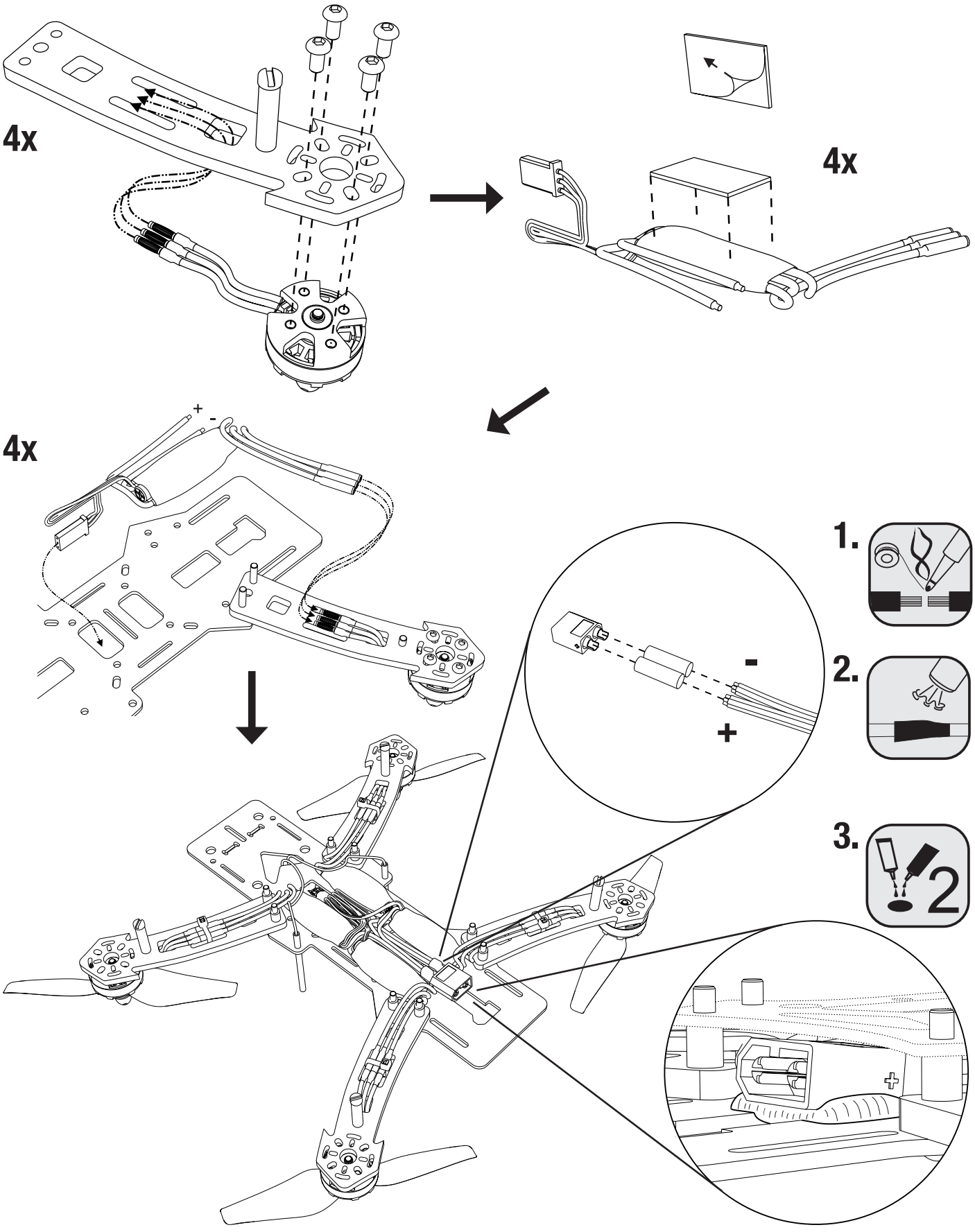

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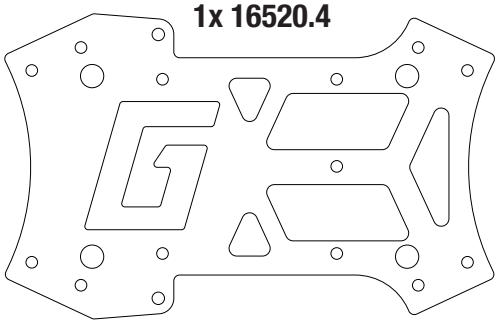

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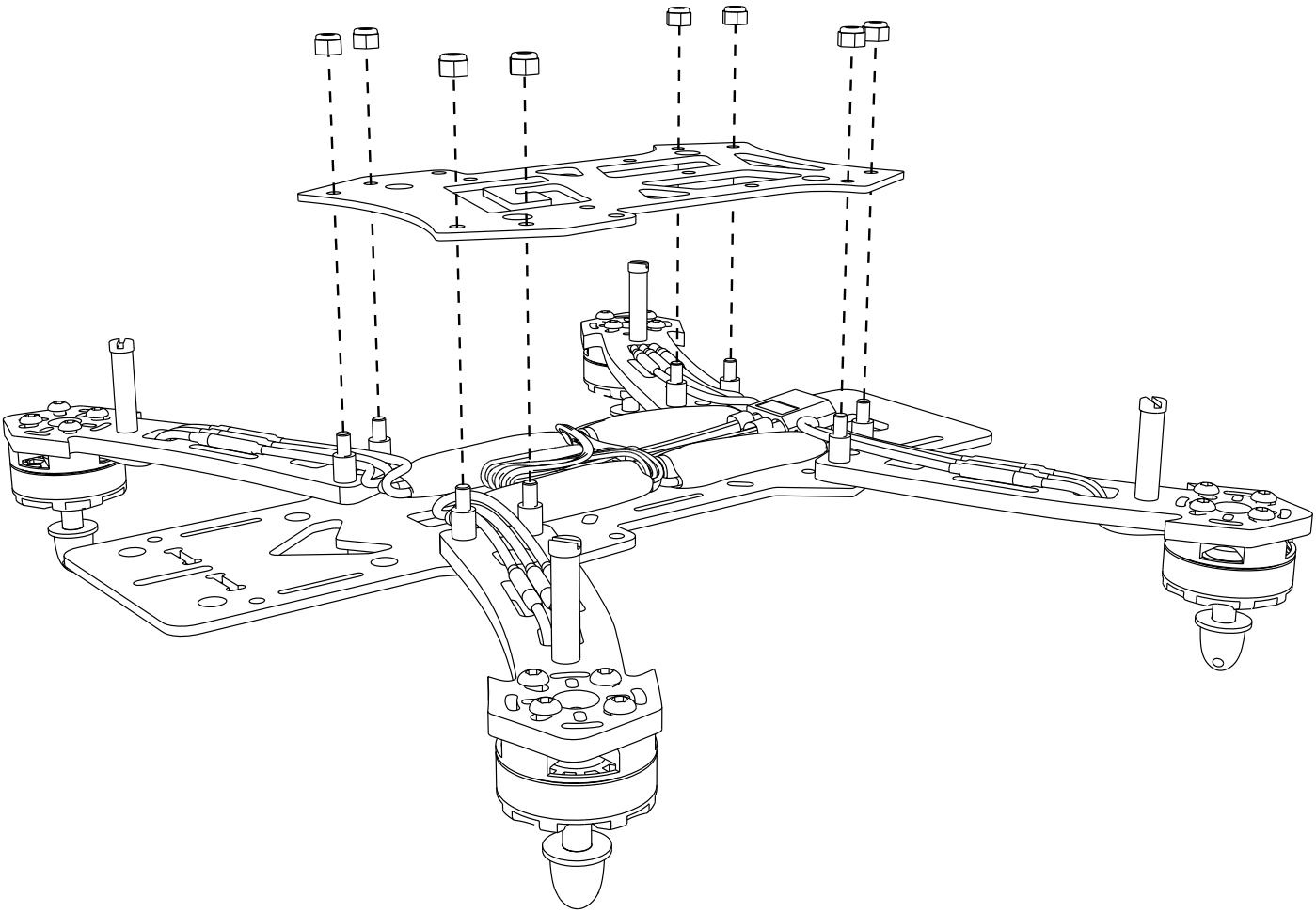
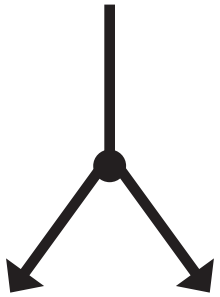
8x 16520.15
M3



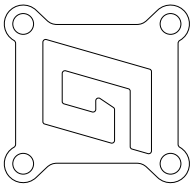


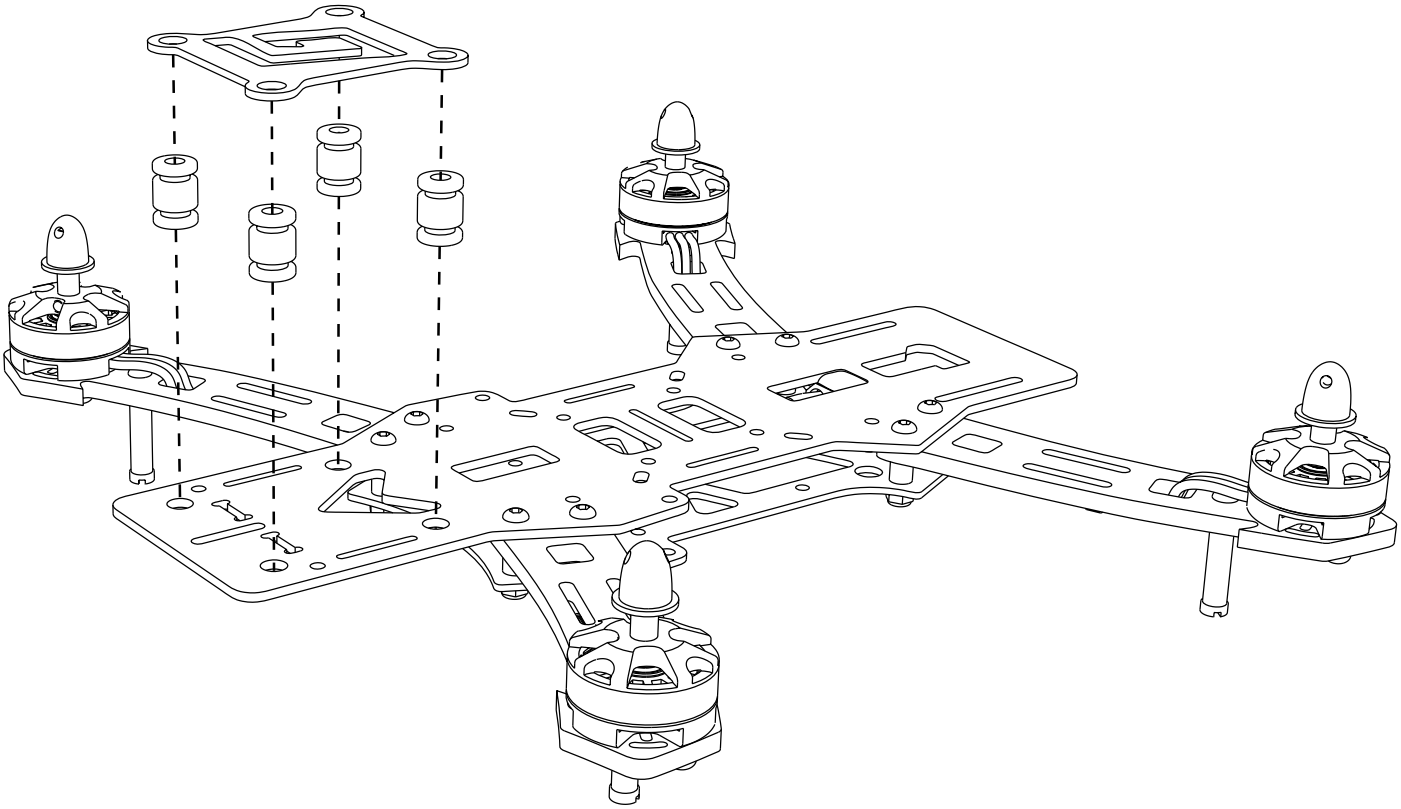
5a.

5b.

5a.

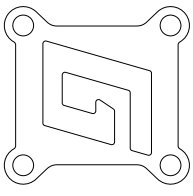
1x 16520.1 4x 16520.14

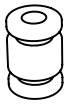


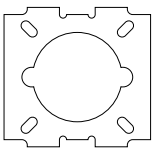


5b.

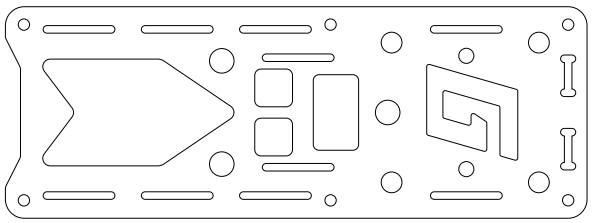
1x 16520.1 4x 16520.14 12x 16520.11 M3x6 6x 16520.8 35mm 1x 16520.6

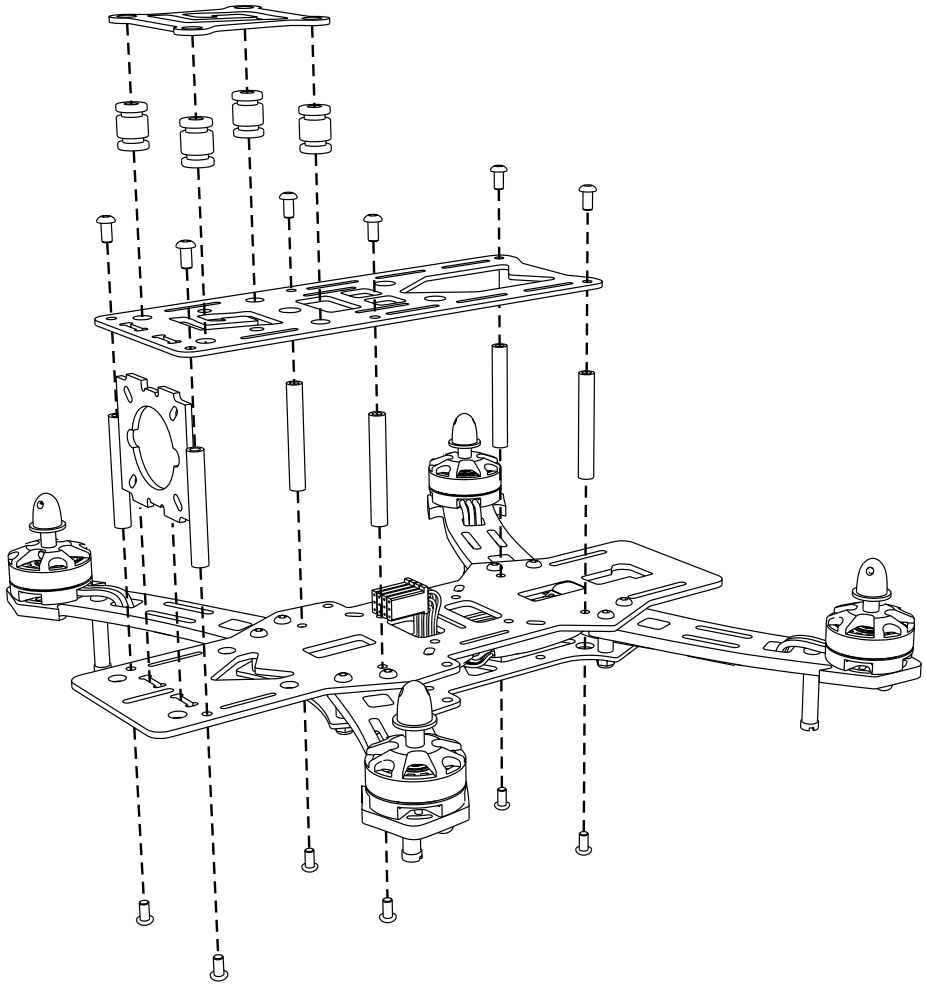






1x 16520.2





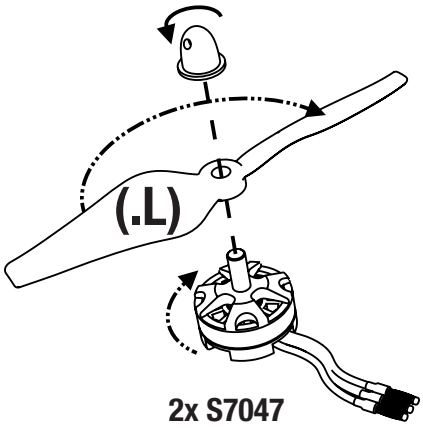
6.

2x 1347.5x3

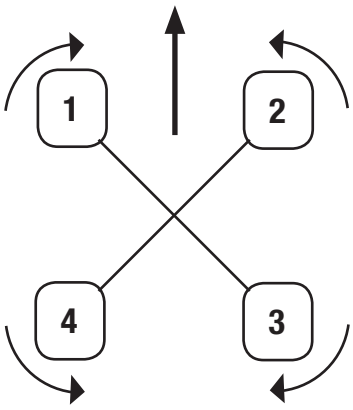
2x 1348.5x3

4x S8439

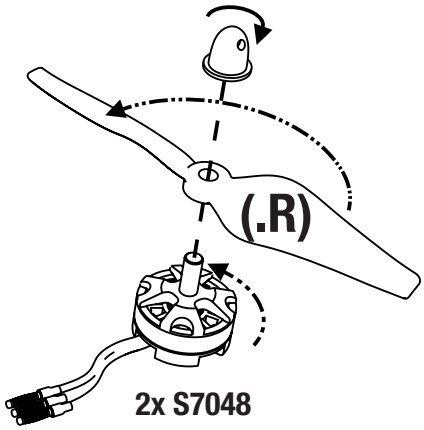
1 + 3



2x S7047

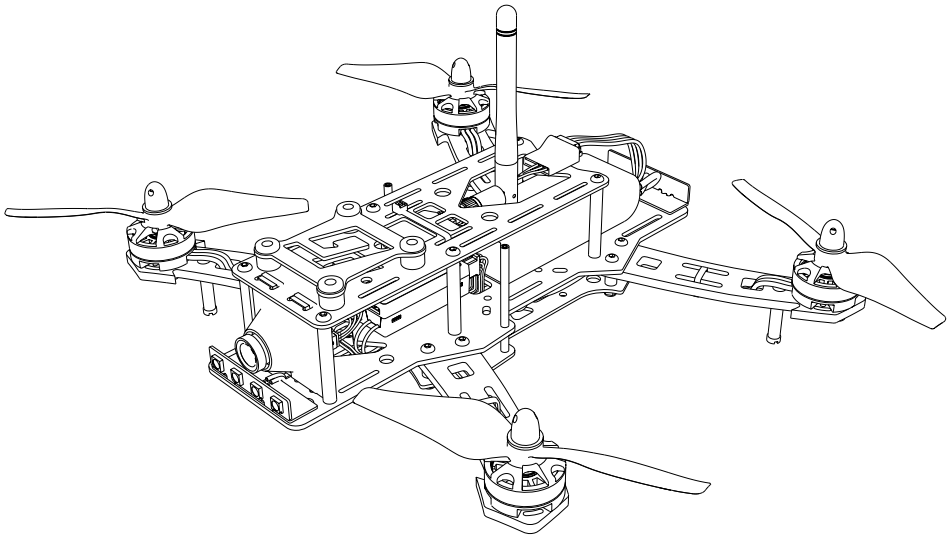


2 + 4



2x S7048

Assembly example with camera and transmitter



Technical Data

S7047/S7048 ULTRA 2804 2300KV brushless motor (clockwise and counter clockwise)

- Turns/Volt - 2300KV
- Diameter - 28mm
- Operating voltage - 2-4S LiPo
- Shaft diameter - 5mm (clockwise and counter clockwise thread)

S3055 Ultra Control 12A speed controller

- Input voltage - 2-4S LiPo
- Dimensions mm - 25x20x7
- Weight - 9 Grams
- Maximal current - 12A
- BEC output - 1A/5V

1347.5x3 / 1348.5x3 Propellers

- Ø/pitch: 13/7,5 cm
- Weight approx.: 4,0 g
- Ø/pitch: 5/3 “
- Colour: Red or white

Frame dimensions

- Axles distance: 22x28 cm
- Frame height: 7 cm
- Motors height: 6 cm
- Frame: 5.6 x 22.5 x 5.5 cm (thickness 2 mm)
- Arms 10x3 cm (thickness 3 mm)
- Weight:129 g

Conformity declaration

CE

S3055 Ultra Control 12A Speed controller

Graupner/SJ declares that the product is conform to EU norms.

EMV 2004/108/EC: EN 61000-6-1; EN 61000-6-3

Spare parts

2x	S4047	ULTRA 2804 2300KV Brushless Motor, right
2x	S4048	ULTRA 2804 2300KV Brushless Motor, left
2x	1347.5x3	Propeller white
2x	1348.5x3	Propeller red
4x	S3055	Ultra Control 12A
1x	16520.1	Action Cam holder plate
1x	16520.2	Upper cover plate
1x	16520.3	Main chassis plate
1x	16520.4	Lower cover plate
4x	16520.5	Copter arm
1x	16520.6	Camera holder plate
4x	16520.7	Aluminium spacer 20 mm
6x	16520.8	Aluminium spacer 35 mm
8x	16520.9	Aluminium spacer 5 mm
5x	16520.10	Round-head hex M3x8 screw
29x	16520.11	Round-head hex M3x6 screw
9x	16520.12	Round-head hex M3x16 screw
17x	16520.13	Hex M3x5,5 screw
5x	16520.14	Rubber shock-absorber
9x	16520.15	Locking nut M3
5x	16520.16	Nylon screw M3x6
3x	3391.8	Shrink tube Ø 8mm, black, red, 20mm
24x	3391.3	Shrink tube Ø 3mm, black, 20mm
1x	2970.D35	XT-60 connector
12x	R8080	Gold plated connectors set, 2mm
3x	S8376	Double side adhesive pads for speed controllers
1x	R8039	sylicon cable, 14 AWG x 100mm, red - black
1x	S8167	Servo lead extender 100mm

Other interesting actual accessories, as FPV goggles, transmitter, cameras, propellers, batteries, Motors and speed controllers for your Race Copter are available in the Accessories section of the relevant article in the Homepage of our Online-shop: ***www.graupner. de***

Suggested accessories

- 9717.3.D35 LiPo battery V-MAXX 50C 3/1500 11,1V XT60
- 33579 GR-18 HoTT Receiver
- S1002 mz-12 or 33112 MX-12 (or higher)
- 48331 Pilot HD Cam
- 16520.40 ALPHA 250 MINI CAMERA
- 48326 5,8 GHz 25mW transmitter
- 48325 Fatshark AttitudeV2 CE Kit goggles
- 48323 Fatshark Dominator HD Headset goggles

Notes for environmental protection

DISPOSAL NOTES

The symbol on this product, its operating instructions or packaging gives notice that this product may not be discarded as common household waste at the end of its service life. It must be turned over to a recycling collection point for electric and electronic apparatus.
The materials can be recycled according to their markings. You make an important contribution to protection of the environment by utilizing facilities for reuse, material recycling or other means of exploiting obsolete equipment.
Batteries must be removed from the unit and disposed of separately at an appropriate collection point. Please inquire with local authorities about the responsible waste collection locations.

Warranty

Graupner/SJ GmbH, Henriettenstrasse 96, 73230 Kirchheim/Teck, Germany guarantees this product for a period of 24 months from date of purchase. The guarantee applies only to such material or operational defects witch are present at the time of purchase of the product. Damage due to wear, overloading, incompetent handling or the use of incorrect accessories is not covered by the warranty. The user´s legal rights and claims under guarantee are not affected by this guarantee. Please check the product carefully for defects before you are make a claim or send the item to us, since we are obliged to make a charge for our cost if the product is found to be free of faults.

The present construction or user manual is for informational purposes only and may be changed without prior notice. The current version can be found on the Internet at www.graupner.de on the relevant product page. In addition, the company Graupner/SJ GmbH has no responsibility or liability for any errors or inaccuracies that may appear in construction or operation manuals.

No liability can be accepted for printing errors.